

## **REMARKS**

By the above amendment, independent claims 1, 34 and 58 under consideration have been amended to clarify features of the present invention, with claim 1, for example, being amended to incorporate features of dependent claims 14 and 15 therein, with claim 15 being canceled, and other dependent claims being amended in light of the amendment of claim 1. Also, claim 1 has been amended to recite the feature of means for cooling of the ring-shaped member which features are recited in the dependent claims. Applicants note that independent claims 34 and 58 have been amended in a similar manner, while reciting that a surface of the ring-shaped member which is exposed to the plasma is made of a conductor material or a semiconductor material including silicon, carbon, silicon carbide or aluminum, which represent selected features of the dependent claims, which materials of the ring-shaped member 12 and the surface 13 thereof is described at page 14, lines 22-26 of the specification, and which is supplied with a high-frequency power providing a bias to the ring-shaped member, such that the materials are necessarily conductor materials or semiconductor materials, and as described at page 14, lines 3-6 of the specification, serve for consuming or controlling radicals remaining in the proximity of sample 6 to uniform the amount of radicals incident to the sample 6, whereby as described at page 14, lines 8 and 9 of the specification, the variation in time of the reaction is minimized by cooling function 15 effecting cooling of the ring-shaped member. Applicants submit that these features which were generally present in the dependent claims and have now clearly set forth in the independent claims of this application are not disclosed or taught in the cited art, as will become clear from the following discussion.

The rejection of claims 1-8, 10-12, 14-17, 21-29, 31-34, 36, 50-53, 55 and 58-65 under 35 U.S.C. 103(a) as being unpatentable over Yokogawa et al, JP 9-321031 (machine translation) in view of Collins et al, U.S. Patent No. 6,068,784 and further

in view of Toshihisa et al, JP 07-310187, Collins et al, U.S. Patent No. 6,054,013, or Collins et al, U.S. Patent No. 6,074,512; the rejection of claim 9 under 35 U.S.C. 103(a) as being unpatentable over the aforementioned combination of references and further in view of Gupta et al, U.S. Patent No. 5,902,494; and the rejection of claims 15-16, 20, 56-57 and 66 under 35 U.S.C. 103(a) as being unpatentable over the aforementioned first combination of references and further in view of Kaji et al, EP 0793254 A2; such rejections are traversed insofar as they are applicable to the present claims, and reconsideration and withdrawal of the rejections are respectfully requested.

The Examiner is reminded of the requirements to support a rejection under 35 U.S.C. 103, as set forth in the decisions of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988) and In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002), which decisions have been set forth at least in the Amendment filed July 1, 2002. Applicants submit that in setting forth the rejections under 35 U.S.C. 103, the Examiner has recognized the deficiencies of the individual references and has merely selected different parts of individual references in an attempt to reconstruct the present invention, which is not proper and represents the principle of "obvious to try" which is not the standard of 35 U.S.C. 103. See In re Fine, *supra*.

Turning to Yokogawa et al, irrespective of the contentions by the Examiner, this reference does not disclose "a ring-shaped member disposed in the periphery of the sample" as previously recited in each of independent claims 1, 34 and 58, such that it is apparent that this reference does not disclose or teach that the ring-shaped member has a surface which is exposed to the plasma nor the makeup thereof as a conductor material or semiconductor material, nor means for applying high-frequency power to the ring-shaped member which features recited in dependent claims, nor cooling of the ring-shaped member as now recited in each of the independent claims. As is apparent, in setting forth the rejection, the Examiner

refers to other cited art in an attempt to reconstruct the claimed invention in a manner not disclosed or taught by Yokogawa et al. Thus, applicants submit that all claims patentably distinguish over Yokogawa et al in the sense of 35 U.S.C. 103.

The Examiner recognizing at least some deficiencies of Yokogawa et al, suggests that Collins et al '784 disclose an apparatus in which a controller 86 is used to automate the plasma apparatus and therefore, it would be obvious to modify the apparatus of Yokogawa et al with such structure. Looking to Fig. 1 of Collins et al '784, assuming that the member surrounding the wafer 5 and may possibly be considered to be a ring-shaped member disposed at the periphery of the sample or wafer and is not numbered and appears to be part of insulator 321. However, it is readily apparent that Collins et al '784 does not disclose means for applying high-frequency power to the ring-shaped member nor means for cooling of the ring-shaped member as recited in each of independent claims 1, 34 and 58, such that it is apparent that this combination fails to provide the claimed features as recited in the independent and dependent claims of this application, noting that Collins et al '784 also fails to disclose the makeup of the ring-shaped member as recited in independent claims 34 and 58 and dependent claim 14, as well as other features of the independent and dependent claims of this application. Thus, applicants submit that this proposed combination of references fails to provide the claimed features of the independent and dependent claims of this application, and all claims should be considered to patentably distinguish thereover.

As to Toshihisa et al, irrespective of the Examiner's reference to a ring-shaped member 6, this reference in paragraph [0005] indicates that the so-called ring-shaped member is a protection plate "formed with a ceramic". A similar description of a protection plate 6 using the ceramic is found in paragraph [0009] and it is readily apparent that ceramic is not a conductor material or semiconductor material and Toshihisa et al, like the other cited art, does not disclose means for

applying high-frequency power to the ring-shaped member, which is in the form of a bias power which serves for controlling an etching condition in the manner described in the specification of this application. Thus, irrespective of the further addition of this reference with Yokogawa et al and Collins et al, the resultant combination fails to provide the claimed features as set forth in each of independent claims 1, 34 and 58 and the dependent claims of this application. Thus, applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

As to Collins et al '013 or Collins et al '512, applicants submit that such references, if considered to disclose ring-shaped members, do not disclose means for applying high-frequency power to the ring-shaped members nor the construction of the ring-shaped member or means for cooling of the ring-shaped member. Applicants submit that it appears that in such reference, a temperature control apparatus for the so-called ring-shaped member is a heater. In any event, applicants submit that the combination with the other cited art does not overcome the deficiencies of the other cited art with respect to the independent and dependent claims of this application, and again represents a hindsight reconstruction attempt in complete disregard of the teachings of the individual references. Accordingly, applicants submit that all claims patentably distinguish over this proposed combination of references.

With respect to Gupta et al, irrespective of the disclosure of such reference, applicants submit that Gupta et al, taken alone or in combination with the other cited art, fails to provide the claimed features of independent claims 1, 34 and 58 and the dependent claims thereof including claim 9. As such, applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 U.S.C. 103.

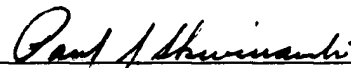
As to Kaji et al, while this reference discloses the application of a bias voltage to a ring-shaped member, this reference does not disclose the cooling of the ring-shaped member and applicants submit that Kaji et al fails to provide the claimed features as set forth in the independent and dependent claims, and that the combination with the other cited art represents a hindsight reconstruction attempt utilizing the principle of "obvious to try" which is not the standard of 35 U.S.C. 103. As such, applicants submit that all claims present in this application patentably distinguish over the cited art, and should now be in condition for allowance.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance, and issuance of an action of a favorable nature is courteously solicited.

Applicants note that in accordance with the present practice concerning drawing changes, submitted herewith is a corrected drawing of Fig. 1 in accordance with the proposed amendment to the drawings submitted on June 4, 2001.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (500.37328CX1) and please credit any excess fees to such deposit account.

Respectfully submitted,

  
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